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NEWCASTLE DISEASE IN CYPRUS

BY

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The purpose of this article is not to record any original work but to give a general history of the appearance and course of an epidemic of Newcastle disease in Cyprus. Since the vaccine used during this epidemic was not prepared by the writer, only those facts which are relevant to its use in Cyprus are mentioned.

ORIGIN

Newcastle disease is believed to have appeared in Cyprus during early June, 1949, when heavy losses were reported amongst poultry kept in two villages about 15 miles apart. These are neither ports nor important centres of communication and it is difficult to explain why a disease new to the country should have made its first appearance in such out-of-the-way localities. Poultry products and straw packing material are not allowed into the island except under careful supervision and it is assumed that the virus was introduced either by migratory birds—as is most probable—or by smuggled poultry. The latter is unlikely, but cannot be ruled out, as at times elaborate attempts have been made to bring in fighting cocks from Turkey, and it is possible that the disease introduced in this way would smoulder undetected amongst the backyards of the capital or its suburbs and flare up into epidemic form if it should be carried out to a village.

DIAGNOSIS

The mortality and *post-mortem* lesions encountered were typical of the acute form of the disease and as such do not require a detailed description. Once Newcastle disease was suspected, advice was sought from the Ministry of Agriculture's Veterinary Laboratory, Weybridge, England. Subsequently, specimens of liver and spleen removed aseptically from experimentally infected birds were sent to Weybridge for diagnostic purposes together with sera from recovered birds. The latter showed a strongly positive haemagglutination inhibition titre, and Newcastle disease virus was isolated from the liver and spleen samples. Concurrently, samples of live virus and immune serum had been received from Weybridge and survivors from field outbreaks were found to give strong positive reactions to the H.I. test. An attempt was made to isolate the virus in Cyprus on embryonated eggs via the chorio-allantoic route, but although the embryos died at about the 48th hour following inoculation and showed typical haemorrhages, the haemagglutination titre of the allantoic fluids was of a very low order. Subsequently it was ascertained that this was only to be expected following inoculations by this route, but the pressure of field duties at this time made it necessary to curtail further work. Quarantine measures were taken in infected areas during mid-June and by the middle of July sufficient information was available for positive diagnosis to be made.

EPIDEMIOLOGY

The poultry industry in Cyprus is essentially a back-yard one, the women-folk keeping the large majority of birds, in flocks of from 5 to 20. These birds are allowed to run freely together in the streets and on common land, and when sudden mortality occurs in such village flocks it is usual for the owners to sell the remaining apparently healthy stock to avoid further losses. Such birds are taken into the larger towns by dealers, and for obvious reasons are resold for meat as quickly as possible at bargain prices. For table purposes, birds are always bought alive, being kept usually for a few days with the purchaser's flock before being killed. Occasionally such birds may be retained as breeding stock.

Apart from this normal market, there is, during the hot weather, a steady traffic in live poultry from the larger towns to the mountain holiday resorts, a considerable quantity being carried in private motor-cars and buses by individuals visiting their families. In addition, poultry are frequently carried by school teachers to and from their holiday quarters, by Government employees on transfer, and by gipsies. New outbreaks have in fact been traced on numerous occasions to all of these sources.

Clinical evidence of the disease was never observed amongst turkeys, ducks, pigeons or geese and there was no indication that these birds were concerned in spreading the infection. Also it would appear that these classes of poultry, even if infected, could not have remained as carriers for more than a few days because the disease was not observed to recur in any of the old centres, even although young and susceptible chickens were being reared continually. In this connection it is of interest to note that Asplin (1947) has shown that ducks and geese became infective three or four days after artificial exposure to the virus and remained infective for a further period of three to four days. Similarly there was no indication that any of the Cyprus outbreaks originated from recovered hens or clinically unaffected survivors.

This summary of local conditions illustrates to some extent the difficulties in the way of controlling any infectious poultry diseases in Cyprus. As in most countries, poultry husbandry is the Cinderella of the livestock industry and is not taken very seriously. Only after a prolonged course of propaganda was a working measure of public opinion and co-operation obtained.

CONTROL MEASURES

Facilities and staff were not available for the routine isolation of the virus and the haemagglutination inhibition test, and diagnoses therefore were based on epidemiology combined with *post-mortem* findings. Where heavy mortality was found associated with either haemorrhages in the proventriculus or typical ulcers in the small intestine, a positive diagnosis was given. Where

post-mortem lesions were suspicious but not typical, quarantine measures were imposed provisionally. In practice this system worked quite well, because when the disease was present, sufficient pathological material could be obtained to enable a positive diagnosis to be made rapidly.

Since some importance was attached to the intestinal lesions, which were not always numerous, the following description is given. If any ulcers were present they were always found in the two following positions: (1) a round ulcer in the ileum, about 5 to 7 mm. in diameter, placed about 1 cm. posteriorly to the extremities of the caeca; and (2) a long, ragged ulcer situated on the inside of the first curve of the duodenum. In early cases these sites might show well-defined hyperaemic areas, but the more characteristic lesion was in the form of a raised yellow caseous patch covering a shallow ulcer and surrounded by a narrow hyperaemic ring. The impression was obtained that such lesions were much more likely to be found in birds which had died from the acute form of the disease.

In every affected village from one to four Quarantine Guards were appointed, whose task was to prepare a census of the poultry population, including the losses; also to ensure that all flocks were confined to their own premises, that no poultry were moved out of the village, and that all dead birds and offal were properly buried or burnt.

Vaccination was then carried out as early as possible, and every bird in the village over the age of about four weeks was treated. In the more remote hill areas it was usually the practice to conduct vaccinations in all villages in the vicinity of an outbreak whether infected or not, and in the long run this probably saved both time and transport. The vaccine used was an attenuated strain described by Komarov (1947) and prepared at the Haifa Laboratories of the Israel Veterinary Department. It was given as an intramuscular injection and under Cyprus conditions this vaccine proved extremely efficient. In several villages where outbreaks were not reported in time and the disease ran its natural course, hardly one bird was left alive a fortnight or three weeks after deaths started. Where quarantine was enforced but vaccinations had to be delayed, the spread of infection was still serious. After vaccination, deaths would still be reported for a matter of 10 days, but, except in individual cases where permanent nervous symptoms had resulted, in no instance was mortality attributable to Newcastle disease encountered after the second week following vaccination. In practice it became the routine to lift the quarantine from a village between two and three weeks after completion of vaccination and fresh outbreaks were never traced back to such villages.

As mentioned previously, most of the poultry were kept in units of from 5 to 20, and as the vaccinators moved from house to house, frequently having to wait while the birds were caught, their progress was necessarily slow. On the average day's work one man might be expected to inoculate some 500 birds.

Compulsory slaughter, with or without compensation, was considered, but rejected as impracticable under local conditions.

The only other control measure which was taken was the prohibition of all poultry movements from the larger towns.

Vaccine.—The vaccine mentioned previously arrived by air freight in the form of undiluted allantoic fluid, sealed in ampoules which were packed on ice in thermos flasks. After dilution with 250 volumes of distilled water it was given as an intramuscular injection in doses of ½ c.c. Dilutions were carried out in the field so that the diluted vaccine could be used as quickly as possible. Teams of vaccinators took with them a stock of virus ampoules packed on ice and dilution bottles containing sterile distilled water, and were thus relatively self-contained and mobile. Moreover, this procedure offered very definite administrative advantages over diluting and bottling in the laboratory.

Under local conditions it was noted that on the fourth day after vaccination there occurred a definite febrile reaction which in adult birds commonly was associated with complete cessation of egg production for a period of about one month. Mortality, probably due to the vaccine, occurred in a very small percentage of birds, and a few cases of nervous derangement were observed. However, in view of the small number of flocks from which a satisfactory history could be obtained, no attempt is made to express these conditions as percentages of the whole. Miss Goldsmit, in a personal communication, states that in Israel, mortality has hardly ever been encountered as the result of vaccination provided that the birds vaccinated were over two to three weeks of age and not in the incubation period of the disease. It was found that birds vaccinated two or three months previously possessed a strong immunity against heavy natural infection and field observations indicated that this immunity lasted for at least one year.

Course of the Disease

This is most easily summarised as follows:—

		Number of outbreaks	*Number of villages where vaccinations were carried out*	*Number of birds vaccinated*
1949	June-Sept.	23	19	52,295
	Oct.-Dec.	92	114	217,226
1950	Jan.-March	31	34	47,165
	April-May	8	9	16,365
		154	176	333,051

Total number of village areas in Cyprus 664
Total number of village infected districts 528

During the first half of the epidemic outbreaks were occurring much faster than they could be handled adequately, and since there was often a delay of several days or longer before an outbreak was detected, generally by then the infection had spread to other centres from which the process was repeated. Towards the end of the year the situation was easier, and during the next hot season there was no recrudescence of the disease; instead, outbreaks became progressively more infrequent until May 29th, 1950, when the last confirmed case was detected.

During the epidemic the disease was always encountered in the acute form, and it seems most improbable that an infection of this nature could remain undetected for long. Moreover, there has been no evidence at any time either that the field virus has mutated to a sub-acute type, or that the vaccine strain itself is capable of natural

propagation or mutation. As far as is known, therefore, Newcastle disease virus no longer exists in Cyprus.

Discussion

The eradication of any highly infectious disease under Middle East conditions presents a number of well-recognised problems. In this case although the disease occurred in epidemic form it could not be regarded as endemic to the country; therefore the procedure was mainly a matter of following up outbreaks as they occurred rather than one of eradication on an area basis. The virulent nature of the disease generally enabled outbreaks to be detected fairly quickly, and control was facilitated also in that the fresh introduction of infection from outside the island was improbable.

The disappearance of Newcastle disease as described was somewhat unexpected, nevertheless; large numbers of young and susceptible birds were being raised in villages in which the disease had appeared and it was assumed that probably these would contract the infection later in life unless immunised. In fact, although these young stock were not vaccinated there was no evidence that the disease appeared for a second time in a village subsequent to the vaccination of all birds over the age of one month. This might be attributed partially to passive immunity transferred through the yolk sac, but the explanation does not fit all cases and this resistance anyhow would have been of short duration. Clearly, vaccination combined with the enforcement of quarantine measures must have reduced the opportunities for the spread of the disease from infected centres, and eventually when most of the poultry in many villages in the infected areas were resistant to Newcastle disease, it must have become increasingly difficult for such chance infections to give rise to further outbreaks.

Whether this is the complete explanation, however, remains a matter for conjecture.

Summary

A widespread epidemic of Newcastle disease in Cyprus is described. The steps taken to control this epidemic consisted in quarantine and sanitary measures, combined with mass vaccinations in infected areas, using an attenuated live vaccine prepared in the State of Israel.

Within one year from the commencement of these measures the disease appeared to have died out, and no further cases were detected during the following 16 months.

Acknowledgments.—The writer wishes to express his indebtedness to Mr. N. Dobson, Senior Veterinary Research Officer, Ministry of Agriculture and Fisheries, for much helpful advice, for examining sera and virus material, and for confirming the tentative diagnosis of Newcastle disease; to Dr. A. Komarov, for supplying the vaccine; and to Mr. R. J. Roe, O.B.E., Chief Veterinary Officer, Cyprus, for assistance in the preparation of this paper and for permission to publish this account of work carried out under his direction.

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Weekly Wisdom

There is no doubt that of all the institutions which have grown up among us over the centuries, or sprung into being in our lifetime, the constitutional monarchy is the most deeply founded and dearly cherished by the whole association of our peoples. In the present generation it has acquired a meaning incomparably more powerful than anyone had dreamed possible in former times.—The Prime Minister.

THE EFFECT OF SULPHANILAMIDE ON THE FERTILITY OF BULL SEMEN

BY

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Knodt and Salisbury (1946) found that the addition of sulphanilamide to the semen of bulls increased the liveability of the spermatozoa. Foote and Salisbury (1948) showed that sulphanilamide decreased the rate and increased the duration of motility, and Foote and Bratton (1950) showed that it maintained spermatozoal motility. Salisbury and Bratton (1948) found that the addition of sulphanilamide to semen diluted with egg yolk-citrate buffer inhibited a fall in conception rate where dilution exceeded 1 : 100. Stewart (1950), Almquist (1951) and Salisbury and Knodt (1947) all failed to show any significant difference in the fertility of semen when sulphanilamide was added. It would seem, therefore, that although sulphanilamide had an effect on the motility and liveability of bull semen, this effect had no bearing on fertility except where dilution rates were high. In order to examine the effect of the drug on semen under conditions prevailing at this centre it was decided to run a field trial in conjunction with the normal routine work of the centre.

Semen was collected by the accepted method, using a short model artificial vagina, and was used for either one or two days at the main centre according to routine requirements. The same semen was dispatched to the subcentres by rail and was used by them one day later than at the main centre. Thus the main centre used semen on first and second days, the subcentres on second and third.

After collection the semen was left to stand on the laboratory bench and allowed to cool slowly to room temperature. The sample was then split into two equal portions. If two ejaculations were taken each was allowed to cool, after which they were mixed and the bulk then divided into equal parts. One part was diluted with egg yolk-citrate buffer, the other with egg yolk-citrate buffer with sulphanilamide added. The composition of the buffer solution was as follows :—

Sodium citrate (analar) 3·2 grammes per 100 c.c. corrected to *p*H 6·8 by the addition of 10 per cent. solution of citric acid. Sterilised at 10 lb. for 15 minutes.

Sulphanilamide was added to this at the rate of 0·3 gramme per 100 c.c.

Dilution occurred at room temperature and each half of the semen was diluted at the same rate. This varied between 1 : 15 and 1 : 70 according to requirements. After dilution each inseminator was supplied with equal quantities of each sample and used them alternately on the first inseminations. By this means random sampling was best achieved and the numbers in each group kept reasonably parallel. Inseminations were carried out by the rectal intrauterine technique.

The trial was conducted over the period October to March, 1950-51, and bulls of normal fertility standards were used. Imported semen was not included in the trial so that only semen from South Devon bulls collected at the main centre was studied. Thus, in all, five bulls took part, serving the main and two subcentres. The inseminations were done by the staff of 22 lay inseminators.

The results are expressed as the percentage of cows which were not reported for re-insemination (*i.e.*, presumed to have held) and were taken at two periods, one at three weeks, the other at three months after the end of each month of the trial. The figures overleaf show the sum total over the whole of the trial period

SULPHANILAMIDE-CITRATE cf. CITRATE ALONE TRIALS
October, 1950, to March, 1951

Dartington	Number of first inseminations		% Non-returns at three weeks		% Non-returns at three months		Fall in % of presumed non-returns from three weeks to three months	
	Citrate	Cit. sulphan.	Citrate	Cit. sulphan.	Citrate	Cit. sulphan.	Citrate	Cit. sulphan.
A.D.K.	223	221	78·0	86·4	69·0	76·1	9·0	10·3
A.R.	513	479	82·9	83·9	71·1	73·4	11·8	10·5
D.L.6	515	498	81·0	82·2	70·4	70·0	10·6	12·2
D.P.	290	285	81·4	82·4	71·1	69·8	10·3	12·6
E.F.76	535	552	81·7	81·0	68·7	71·9	13·0	9·1
	2,076	2,035	81·4	82·8	70·0	72·0	11·4	10·8
Difference in C. Rate			1·4		2·0			
Subcentres								
A.D.K.	225	234	80·0	83·6	70·7	70·5	9·3	13·1
A.R.	578	566	80·0	80·5	72·0	68·8	8·0	11·7
D.L.6	571	531	81·7	80·7	68·9	70·5	12·8	10·2
D.P.	396	390	78·7	80·0	67·5	68·7	11·2	11·3
E.F.76	582	548	80·5	83·2	68·4	71·1	12·1	12·1
	2,352	2,269	80·3	81·5	69·5	70·0	10·8	11·5
Difference in C. Rate			1·2		0·5			
Total								
A.D.K.	448	455	79·0	85·0	69·8	73·3	9·2	11·7
A.R.	1,091	1,045	81·2	82·2	71·6	71·0	10·6	11·2
D.L.6	1,086	1,029	81·3	81·5	69·5	70·4	11·8	11·1
D.P.	686	675	79·9	81·1	69·1	69·2	10·8	11·9
E.F.76	1,117	1,100	81·1	82·2	68·5	71·6	12·6	10·6
	4,428	4,304	80·8	82·1	69·8	70·9	11·0	11·2
Difference in C. Rate			1·3		1·1			

DISCUSSION

It is evident that there is no significant difference between the conception rates of the two groups. This applies to the three weeks' as well as the three months' conception rates. Moreover, no significant difference occurred between the two groups either at the main or the subcentres. Although there would appear to be some difference in the two conception rates for the bull A.D.K., this difference is, in fact, not statistically significant. Not only does the trial show that the addition of sulphanilamide did not significantly improve or depress conception rates at this centre, but it also shows that it did not affect the relationship between the three weeks' and the three months' conception rates. This figure remains fairly constant, showing a fall of 11.4 per cent. in the control group and 10·8 per cent. in the experimental group from the early to the late figure at the main centre, with somewhat similar figures at the subcentres and, over the whole trial, showing falls of 11·0 and 11·2 per cent. respectively. This indicates that the addition to the semen of sulphanilamide did not have any influence on the incidence of early foetal death.

SUMMARY

A split sample trial carried out over the winter of 1950–51 at one centre in Devon showed that addition of sulphanilamide to egg yolk-citrate buffer did not significantly affect the conception rate of the centre or of any of the individual bulls ; similarly, no alteration occurred in the relationship between presumed conception rates at three weeks and those at three months, indicating that the incidence of early foetal death was not affected.

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OLYMPIC HORSE TRIALS

The British Horse Society announces that preparations are now well advanced for the Olympic Horse Trials to be held at Badminton on April 23rd, 24th and 25th, 1952. Seven riders and 14 horses are already undergoing training with Captain Tony Collings at Porlock. Some of these riders and horses will carry out the full Olympic dressage test on the first day and, although not actually in the competition, will carry out the second day's programme, or such parts of it as their state of training and fitness allow. On the third day, in addition to the final jumping, Co'onel Ansell is arranging for some 12 of our potential jumpers to give an exhibition over a typical Olympic course, and the Duke of Beaufort has given permission for whatever may be required in the way of ditches and water jumps to be prepared in the jumping arena. The cross country course on the second day has been much altered to conform to what may be expected at Helsinki. Some 14 new fences are in preparation and the total length of the course is 17 miles.

Although foreign countries will not be competing this year, the event should be full of interest, as both the horses for the three days' event and those for the "Prix des Nation's" jumping will be there.

BRITISH SHOW JUMPING TEAM

The British show jumping team, consisting of Lieut.-Colonel L'ewellyn, Mr. W. H. White and Mr. A. Oliver, was announced last year. The following horses have now been selected: Mr. E. Holland-Martin's Aherlow, the Royal Scots Greys' Bones (bred in East Prussia) Mr. G. B. Robeson's Craven A, Lieut.-Colonel H. M. L'ewellyn's Foxhunter, Miss J. Palethorpe's Holywell Surprise, Mr. W. H. White's Nizefela, Miss M. Whitehead's Nobbler, Miss P. Smythe's Prince Hal, Mr. A. H. Payne's Red Star II, Mr. F. Oliver's Talisman, and Mr. R. W. Hanson's The Monarch.

SODIUM PROPIONATE IN VETERINARY THERAPEUTICS

BY

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Sodium propionate, an efficient bacteriostatic and fungistatic agent, may be regarded as a physiologic antibiotic of man, since propionate is a normal constituent of human sweat and other bodily fluids (Heseltine, 1951a). Consideration of the properties of this compound indicated that it might have important application in veterinary therapeutics and sodium propionate has now been used in the treatment of a variety of local infections ; it is the purpose of this communication to report on the results of these clinical trials.

The history of application of sodium propionate has been described elsewhere by Heseltine (1951b), to whom I am indebted for the following biological data.

Pharmacology.—It is apparent (Heseltine, 1951a) that the systemic toxicity of sodium propionate is extremely low and that the compound is largely metabolised in the body. Although the concentration isotonic with serum and lachrymal fluid is approximately 2·4 per cent., the application of a 10 per cent. solution of *p*H 7·2 to the ocular and nasal mucosae produces only slight, transient stinging ; 20 per cent. solutions do not irritate the intact skin. Persistent topical use has not resulted in local tissue damage or sensitisation and the drug has no apparent anticoagulating effect. When tested by an intradermal histamine technique, in comparison with recognised histamine antagonists, sodium propionate exhibits antihistaminic activity of a sufficient order to be of practical therapeutic value as a hypoallergenic antiseptic.

Microbiology.—Sodium propionate is capable of inhibiting the growth of a wide variety of pathogenic bacteria and fungi, its activity *in vitro* not being appreciably affected by the presence of blood or the use of different media. There is evidence that bacteria may develop resistance less readily to the compound than to sulphonamides. Sodium propionate is bacteriostatic for many Gram-positive and Gram-negative organisms and its effects against *Pseudomonas aeruginosa*, *Proteus vulgaris*, staphylococci and streptococci are particularly noteworthy (Theodore, 1950 ; Heseltine & Galloway, 1951).

Application in Veterinary Therapeutics

The results achieved with sodium propionate in the treatment of local bacterial and mycotic infections are, for convenience, reported under appropriate headings. These trials have occupied a period of about one year and it has thus been possible to observe the clinical course of subjects and to note any side-effects or recurrence of signs and symptoms. Microbiological control was exercised in certain cases, but as routine, treatment was applied empirically.

The preparations employed in this trial comprise ointments containing 5 and 15 per cent. sodium propionate, a 10 per cent. aqueous solution and a vaginal cream containing 5 per cent. of the compound. These preparations, which are supplied under the name "Procid," have been used in the treatment of 188 cases ; 138 of these were treated for the first time with highly satisfactory results and require no detailed account, but the remaining 50 cases earlier had resisted other forms of therapy and are discussed in subsequent paragraphs. The types of previously refractory conditions treated with Procid are summarised in the following table :—

Diseases, Previously Resistant to Other Agents, Subsequently Treated with Sodium Propionate

Duration of treatment	Ocular	Genital	Aural	Dermal	Total
1 to 3 days	5	—	—	1	6
4 to 7 days	2	4	—	6	12
8 to 14 days	4	1	8	4	17
15 and over	3	1	8	3	15
Total	14	6	16	14	50

Ocular Diseases

Careful consideration of a large number of cases treated over a period of about 12 months indicates that, in ophthalmic therapy, Procid is definitely superior to sulphonamides, oxyquinoline, silver nitrate, yellow mercuric oxide and zinc sulphate. In purulent conjunctivitis, moreover, sodium propionate has given better results than penicillin eye ointment, and for the ocular discharges in distemper, it has become routine practice to supply the owner with a 5 per cent. solution and/or 5 per cent. ointment.

The effects of Procid therapy in previously resistant diseases of the eyes and eyelids are demonstrated by the following case histories.

Case 1.—Bull terrier dog with conjunctivitis of right eye. No improvement after two weeks' treatment with penicillin eye ointment and only slight response to sulphacetamide sodium. The eye was bathed with warm sodium bicarbonate solution and Procid ointment 5 per cent. was applied twice daily. Marked improvement was observed after three days, the eye was almost normal after six days, and the case was discharged after 17 days. Examination three months later showed no sign of recurrence.

Case 2.—Sealyham dog with chronic discharge from both eyes of many weeks' duration. The eyes were irrigated daily with 8 per cent. sodium propionate and the 5 per cent. ointment was applied at night. This case was not seen again for 12 weeks and no improvement was then evident. Penicillin eye ointment was substituted for the propionate, but no progress was observed after a further month. Swabs from each eye showed the presence of a Gram-negative bacillus of the Koch-Weeks type. Treatment was resumed with Procid solution and penicillin eye ointment applied twice daily. The left eye then cleared rapidly and the right eye was normal three days later.

Case 3.—Corgi bitch with corneal ulcer of three weeks' standing ; previously treated unsuccessfully with sulphacetamide sodium. Procid solution 10 per cent. was substituted and the eye was normal within 13 days.

Case 4.—Terrier dog with marked entropion and corneal ulceration of five months' standing. Previous treatments had included antiseptic lotions, boric ointment and penicillin eye ointment ; operation was refused. Procid solution 10 per cent. was instilled and the 5 per cent. ointment applied twice daily, the case being examined at weekly intervals. After four months, the ulcer has healed and the entropion greatly improved. Therapy is being continued with the ointment only.

Cases 5 to 13.—Nine dogs with acute conjunctivitis of both eyes, four cases also having ulcers on both corneas and skin abrasions in the orbital region due to rubbing. Earlier therapy with zinc sulphate, sulphacetamide sodium, yellow mercuric oxide and other agents had produced only temporary response. Treatment consisted of instillation of 10 per cent. Procid solution twice daily and in five cases the additional application of the 5 per cent. ointment ; this has yielded more satisfactory and rapid results than any previous form of therapy.

Case 14.—Cat of poor general condition with thick, greenish discharge of pus from the left nostril and eye and a thick exudate from the mouth. Under anaesthesia, a badly diseased tooth was removed, the cavity and the affected nostril then being treated with 1 in 1,000 potassium permanganate. Penicillin in oil (300,000 units) was injected intramuscularly once daily for two days and the eye and nose were irrigated twice daily with sodium bicarbonate solution. After four days there was great improvement in the local and general conditions but, two days later, there was again a slight discharge

from the eye and nostril. Penicillin was again injected and penicillin ointment was applied. On the 10th day there was no change and 10 per cent. sodium propionate solution was then instilled into the eye and nostril twice daily; the tooth socket was syringed with a 5 per cent. solution once daily. After two further days discharge was absent and treatment was stopped; there has been no recurrence after five weeks.

Genital Diseases

Case 15.—Spaniel bitch, aged eight years, with mucopurulent discharge from the vagina. The condition, which was of about five weeks' standing, had been treated elsewhere by local and systemic means. Daily intramuscular injection of 300,000 units of penicillin in oil for three days produced no response, apart from temporary cessation of the discharge. Further injections of penicillin and antiseptic douches and pessaries were of no benefit and the discharge became very profuse. The vagina was then irrigated with bicarbonate solution and the 5 per cent. Procid vaginal cream was introduced twice daily; "Metatone" (Parke Davis) was given three times daily. The discharge was greatly reduced after two days and the improvement was maintained until the exudate had ceased by the 10th day, the vagina and vulva then presenting a normal appearance. Examination at monthly intervals has since shown no recurrence of the disease.

Case 16.—Terrier dog with profuse discharge of pus from the sheath; this had failed to respond to penicillin and the local application of antiseptics, although some temporary benefit had been obtained. The sheath was irrigated daily with 10 per cent. Procid solution and the 5 per cent. ointment was inserted every evening. The discharge ceased after four days and there has been no recurrence.

Case 17.—Spaniel bitch, aged 14 years, of poor general condition and having a thick vaginal discharge. Penicillin injected intramuscularly was of no benefit. The vagina was douched with bicarbonate solution and Procid vaginal cream was introduced twice daily; "Murnil T" (Bayer) was given internally. The discharge had lessened by the 21st day, when daily syringing with 5 per cent. Procid solution was introduced before the vaginal cream was injected. The discharge had ceased four days later and there has been no relapse.

Cases 18 to 20.—Three dogs with long-standing balanitis which had not responded satisfactorily to various treatments applied elsewhere. The sheath was syringed once daily with 5 per cent. Procid solution and the 5 per cent. ointment was applied twice daily. The glans penis returned to normal within four to seven days in all cases. There was no recurrence after four months in two cases and none in the third case, which was observed for two months and then not seen again.

Aural Diseases

The results achieved with Procid in the initial therapy of aural diseases have compared very favourably with those of other agents, while in cases which had previously failed to respond to other forms of treatment, the effects have been highly satisfactory.

Case 21.—Male cat, aged 10 years, with painful discharge of foul, greenish-yellow pus from one ear. Under general anaesthesia, a badly diseased molar was removed as a possible focus of infection. The ear was syringed with 1 per cent. "Cetavlon" (I.C.P.) and examined for foreign bodies; none was found but the canal was greatly inflamed and ulcerated. The latter was dried and dressed with 2 per cent. mercurochrome solution and penicillin in oil (300,000 units) was injected intramuscularly. This treatment was repeated on the following two days, and by the 11th day the condition had greatly improved. The ear was again cleansed with "Cetavlon" and "Murnil T" was given internally. By the 14th day the discharge was again profuse; the penicillin injection was repeated and a daily dressing of penicillin ointment was applied, but the discomfort remained although the discharge was less. On the 21st day treatment was instituted with 10 per cent. Procid solution, five drops being instilled thrice daily after preliminary cleansing. The discharge had ceased by the 33rd day and therapy was continued with 5 per cent. sodium propionate ointment applied once daily for one week. There was no recurrence up to death five months later.

Case 22.—Dachshund dog with a history of intermittent "canker" for nearly two years. Previous treatments with various agents, including penicillin, had failed to produce permanent improvement. After cleaning with dry swabs, 5 per cent. Procid ointment was applied twice daily. By the fourth day the inflammation was much less and there was no discharge, and by the 16th day the ear was normal.

Case 23.—Mongrel dog with infected wounds of conchal cartilage due to neglected bites, there being much discharge and inflammation. Treatment with "Cetavlon," mercurochrome and parenteral penicillin produced no benefit after 16 days. The whole area was then cleansed with a 20 per cent. solution of Procid and the 15 per cent. ointment was applied thrice daily. In a further five days the wounds were healing normally and application of the ointment once daily for four more days ensured a complete return to normal.

Case 24.—Bulldog with chronic painful otorrhoea which had resisted previous treatment with sulphonamide and penicillin. The ear was syringed with a 20 per cent. solution of sodium propionate and 5 per cent. Procid ointment was applied to the canal twice daily. Progress has been slow but steady and after six weeks pain and discharge are absent, the ulceration has disappeared and the lining membrane is acquiring a normal appearance.

Case 25.—Spaniel dog with discharging fistulous wound at the base of an ear, caused by an undetected spear-grass seed which had worked out to the exterior and then been removed at a clinic. The ear had subsequently been treated with sulphonamides. After cleansing with "Cetavlon," 5 per cent. Procid ointment was applied twice daily. The discharge of pus ceased by the fourth day and the condition was normal by the 11th day.

Cases 26 to 30.—These cases comprised five dogs with otorrhoea, all having resisted previous treatment with sulphonamide applications and two having also failed to respond to penicillin therapy; three cases were chronic and the other two were acute. In two instances treatment was commenced with 10 per cent. Procid solution and then continued with the 5 per cent. ointment; in two other cases the ears were syringed with sodium bicarbonate solution and then dressed with 5 per cent. sodium propionate ointment, and in the remaining case, therapy was instituted with mercurochrome and later continued with the ointment. The times taken to effect a return to normal were respectively 30, 18, 12, 30 and 42 days.

Case 31.—Terrier bitch with chronic otitis and aural polypi which had previously been treated with only partial success by means of various unknown agents, sulphathiazole by mouth and surgical removal of polypi followed by penicillin injections and ointment. Much thickening and irritation remained. After syringing with 1 per cent. "Cetavlon," Procid ointment 15 per cent. was applied once daily. Two days later the owner reported that the ointment appeared to cause irritation and so treatment was discontinued and the Technical Division of Harker Stagg, Ltd., was contacted. It was suggested that a 15 per cent. ointment with *p*H modified to that of the canine skin might be more satisfactory and a trial quantity was supplied. This new preparation produced marked improvement within 10 days, with almost complete absence of pain or irritation. The ears still require occasional treatment but, apart from the chronic thickening, they are regarded as normal.

Cases 32 to 36.—Five dogs of good general condition but having chronic otorrhoea of many months' duration. All had failed to respond to treatment with sulphonamides and penicillin. No foreign bodies being detected, the ears were cleansed with 1 per cent. "Cetavlon"; four cases were then dressed with 5 per cent. sodium propionate ointment twice daily and the fifth case was treated with the 10 per cent. solution instilled into the ear twice daily. Marked improvement was observed in all cases after nine days and, although occasional treatment is still required, the ears may, for practical purposes, be regarded as normal.

Dermatoses

Under this heading are included certain conditions which may not be regarded strictly as diseases of the true skin, but it is convenient to classify them within the broader field of dermatoses.

Case 37.—Terrier dog, aged nine months, with suppurating, eczematous lesion of the neck, which had not responded appreciably to three weeks' treatment with sulphanilamide cream, other antiseptic dressings or calamine lotion. This case was subsequently treated by preliminary cleansing with 1 per cent. "Cetavlon" and the application of 15 per cent. Procid ointment. Within three days the entire area was dry and clean and further treatment was unnecessary.

Case 38.—Spaniel dog with multiple interdigital cysts on both forefeet. This case, which was of very long standing, had previously been treated elsewhere with sulphonamides, penicillin, vaccines and other agents, but no definite improvement had resulted. The abscesses were lanced and evacuated as completely as possible and 10 per cent. Procid solution was injected into the cavities twice daily, the area then being massaged with the 15 per cent. ointment. This treatment, which has been applied for six weeks, has produced marked and maintained improvement, but the condition is not yet normal.

Case 39.—Mongrel dog, aged nine years, with anal abscess and intense pruritus. Following evacuation of the abscess and cleansing of the glands, the area was dressed with sulphanilamide cream and "Murnil" was given orally. Marked improvement was evident after seven days' treatment but a discharging sinus remained; this was treated daily with penicillin ointment and 300,000 units of this antibiotic were injected intramuscularly. At the 17th day pus was still present and 5 per cent. Procid ointment was then injected into the sinus twice daily. The lesion had healed 14 days later and there has been no relapse.

Case 40.—Cat with extensive tissue damage in the lumbar region, due to abscess formation following bites. The area had been cleansed and treated with various local antiseptics without permanent benefit. After débridement, the part was bathed daily with Eusol and 5 per cent. sodium propionate ointment was applied; the Eusol was discontinued after five days. By the ninth day the whole area was clean and healing well and there was no recurrence when the case was re-examined eight months later.

Case 41.—Terrier dog, aged four months, with extensive skin lesions suggesting mange and practically the whole body being affected. Examination of skin scrapings confirmed a diagnosis of sarcoptic mange. Daily baths with sulphurated potash were instituted, Crookes colloidal sulphur cream was applied and "Murnil" was given by mouth. A fortnight's vigorous treatment appeared to be bringing the condition under control, but a heavy, secondary bacterial infection was evident at the 14th day; the neck and both flanks were inflamed and the skin was covered with small holes discharging pus. These areas were dressed with sulphonamide cream daily after the sulphur bath, but there was no improvement by the 17th day, when modified treatment was commenced with 15 per cent. Procid ointment applied twice daily following initial cleansing with 1 per cent. "Cetavlon." Three days later healing was obvious and after two further days the sodium propionate could be discontinued. This case is still under treatment with sulphur, but the secondary infection has never recurred.

Case 42.—Sealyham dog with an intensely irritating inflammation of all four feet, the disease being localised to the digits and interdigital areas. This condition was of long standing and had failed to respond to many treatments with penicillin, vaccines, sulphonamide and propamidine creams, iodine solution and various other otions and ointments. Procid ointment 15 per cent., applied twice daily, produced marked improvement and after three days the dog could be left at night without protecting the feet to prevent biting. At the end of one week the feet were normal in appearance and treatment was discontinued. There is occasionally a slight recurrence affecting one or two digits, usually on a forefoot, but this responds rapidly to 5 per cent. Procid ointment.

Cases 43 to 45.—These cases comprised three cats with dry eczema of the lumbar region, backs of legs and inside of thighs. None had responded satisfactorily to "Murnil" by mouth and dressing with "Cetavlon" solution, Eusol or calamine lotion. Therapy was commenced with 5 per cent. sodium propionate ointment applied twice daily, the administration of "Murnil" being continued. All cases were normal after 12 days.

Case 46.—Dachshund with alopecia affecting the whole body in large isolated patches and particularly the legs. Skin scrapings, taken at intervals, failed to show evidence of sarcoptes or demodex. Local and systemic treatments of various kinds were unsuccessful. Marked improvement was produced within a few days by the use of 15 per cent. Procid ointment and "Murnil T," but the condition has not completely cleared after several months' treatment.

Cases 47 to 50.—Four dogs of good general condition, but all having intense anal pruritus; an abscess and fistula were present in one case. Expression of the anal sacs yielded thin greenish pus with an unpleasant, metallic odour and produced transient improvement. Various local applications proved of no benefit, but 5 per cent. Procid ointment applied daily to the perianal areas and inserted into the anus after evacuating the sacs has given complete freedom from symptoms in all cases during a minimal observed period of five weeks.

Discussion

Apart from the cases reported in some detail, sodium propionate has been used in a variety of local diseases and it has now become the antiseptic of choice for routine use in this practice. The clinical results in general have proved to be better than those achieved with other modern therapeutic agents and absence of toxic and allergic effects are factors of great importance in veterinary medicine. Economy in use is considered to be a further advantage to both the practitioner and the owner and Procid fulfils the requirement for an efficient, but inexpensive, bacteriostat and fungistat. Many cases, moreover, which had previously proved resistant to penicillin, sulphonamides and other drugs, have yielded in a very short time to treatment with appropriate sodium propionate preparations.

While the results with this compound have been highly satisfactory in the majority of cases, it is not, of course, represented as a "cure-all." The characteristics of Procid, however, suggest that it will be a valuable and innocuous antiseptic drug for routine, initial therapy and that it will allow the more toxic agents, such as the sulphonamides and antibiotics, to be reserved for special purposes, so minimising the development of side-effects and resistance.

Case No. 31, a bitch with chronic otitis, is of interest since the 15 per cent. Procid ointment, which was originally developed for use in human therapy, caused irritation. Similar effects have also been observed in two other cases and it would appear that the difference in *p*H of the hominal and canine skins necessitates special consideration, in that products formulated for application to one type of tissue may not be suitable for the other. Most of the cases treated by the writer with the standard 15 per cent. ointment tolerated the preparation well but, for routine use, the special veterinary cream, with *p*H adapted to that of the canine skin, would appear to be preferable. This factor does not appear to be involved in the instance of the 5 per cent. ointment, wherein the hydrogen ion concentration and the osmotic pressure are different from those of the more concentrated, standard product.

In the circumstances of a normal veterinary practice, it has been found difficult to maintain full laboratory control on most of the cases recorded in this communication, but it is hoped that other veterinarians with greater facilities at their disposal will remedy this deficiency.

Summary

The biological properties of sodium propionate are quoted briefly and the results of therapy in 50 cases, previously found resistant to other modern agents, are reported. The conclusions drawn after treating a total of 188 cases with Procid preparations are discussed.

Acknowledgment.—I am grateful to the Technical Division, Harker Stagg, Ltd., for information on sodium propionate and for the generous supply of Procid preparations.

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Death of Arete: Champion Jumper

An Exchange message from Mexico City on February 5th states that Arete, champion jumping horse in the 1948 London Olympic Games, died after an operation for a broken leg, and that the horse was buried with military honours.

The Special Correspondent of *The Times* commented: "Arete was one of the outstanding jumpers of all time, and nobody who saw it will ever forget his magnificent performance at Wembley in the Prix des Nations. Ridden by Colonel H. Mariles Cortes, he came last into the ring and made it quite evident by his deliberate and beautiful jumping that Mexico was to be the winner of the event. Arete had had a long career; no horse that was not very strong and resilient would, in any case, be able to put up with the very severe schooling which is customary in that country."

CLINICAL COMMUNICATION

PECULIAR PREPUTIAL CONDITION IN A FIVE-WEEK-OLD PUPPY

C. WENTWORTH ELAM, M.R.C.V.S., D.V.H.,
AND
PETER O. RANDLE, M.R.C.V.S.,
LIVERPOOL

Subject.—A five-week-old mongrel puppy, one of a litter of five.

History.—The owner stated that the subject, together with two other dog puppies in the litter, had been affected since birth. These two died a week previously. A dog puppy in a previous litter was affected similarly and died.

Examination.—The puppy showed no sign of distress and examination disclosed no abnormality apart from the preputial distension. Palpation revealed a tense fluctuating cylinder extending the length of the prepuce. There was no sign of a normal preputial opening, or of the familiar tuft of hair. A tough fibrous area, ¼ inch in diameter, occupied a ventro-anterior position and through it a watery fluid oozed via a number of minute pores. An exploratory puncture made through this fibrosed area with a sterile needle drew off 9 oz. of a clear fluid. The preputial sac collapsed but refilled immediately.

Diagnosis.—Retention of urine within the prepuce, apparently due to congenital absence of a normal preputial opening.

Procedure.—Under morphine/ether anaesthesia the fibrosed area was removed and in the space a " V "-shaped opening made. Skin was sutured to underlying mucous membrane. Within three weeks the prepuce had regained its normal size and the puppy was urinating freely.

Remarks.—An unusual preputial condition in a puppy is reported. One is acquainted with congenital smallness o the preputial orifice giving rise to phymosis and paraphymosis in dogs, and there appears to be a condition closely akin to this, namely, complete absence of a preputial opening, urine being retained and continually voided through minute pores, death occurring when urine production exceeds elimination.

11,000 GUINEAS FOR BULL

On February 6th an Ayrshire breeder, Mr. R. G. Murray, of Spittal, Biggar, Lanarkshire, established what is believed to be a British auction record for the Aberdeen-Angus breed when he paid 11,000 guineas for the supreme champion at the Perth sales. The champion was a 10-month-old bull, Evaberg of Hampton Lucy, shown by Messrs. Standring and Evans, of Hampton Lucy, Warwickshire.

ABSTRACTS

Significance of Faecal Egg Counts in Diagnosis of Parasitic Gastro-enteritis of Cattle*

In this paper Roberts and colleagues discuss the significance of faecal worm egg counts as a measure of the degree of infestation with the more important species of nematodes with particular reference to clinical outbreaks of parasitic gastro-enteritis in Queensland. The disease occurs chiefly in young animals during the winter and early spring. *Haemonchus contortus*, *Bunostomum phlebotomum*, *Cooperia* spp., *Bosicola radiatus*, and less frequently *Trichostrongylus axei* and *Ostertagia ostertagi*, are the most important species. Outbreaks in beef cattle occur usually a few months after weaning at about 10 to 12 months old, but in dairy cattle losses are also commonly met in younger animals.

The value and significance of faecal egg counts is controversial as many influencing factors occur, such as irregularity of egg laying, number and age of worms, bulk of food, resistance of host and anthelmintic treatment, and also the species of worms. They stress that considerable variations occur from hour to hour as well as day to day. Despite such variations, so long as they are appreciated, the authors find that single egg counts from individual animals are of value if a sufficient number of animals is sampled and disease considered as affecting the herd rather than individuals.

A common finding was the number of animals showing severe symptoms with very low egg counts. Heavy infestations of immature *H. contortus* were often found as a cause of low egg counts, but low counts were also associated with the development of resistance. This resistance was a normal phenomenon with *H. contortus*, *B. phlebotomum* and *Cooperia* spp., *B. radiatus*, and possibly also *T. axei* and *O. ostertagi*, and was denoted by the elimination of the majority of the parasites, infestation thereafter remaining at a low level.

Observations showed that conspicuous symptoms of parasitic gastro-enteritis appear in calves only after the infestations have been present for many weeks. Recovery of good health is also slow even after the infestation has been removed either by natural processes or by anthelmintic treatment. Thus, animals severely affected in mid-winter showed symptoms for several months after their egg counts became low and usually recovery did not start until green feed appeared following spring rains. Another feature of the disease was the ability of animals to maintain a healthy appearance despite very high egg counts while nutritional conditions were good, *e.g.*, during summer ; whereas, in winter, when diet was poor, such egg counts were associated with symptoms of severe parasitism.

H. contortus.— In calves 6 to 12 months old a count of 1,000 e.p.g. was frequently indicative of severe clinical haemonchosis. Half this count, when associated with *Bunostomum* (300 e.p.g.) was considered dangerous.

T. axei.—Counts above 100 e.p.g. were uncommon but 750 to 900 e.p.g. were met in eight- to nine-months-old calves without noticeable symptoms, during the summer. In Great Britain 800 to 1,000 e.p.g. are considered pathogenic in yearlings and 400 e.p.g. in grown cattle as " suspicious."

O. ostertagi.—Low counts of not more than 150 e.p.g. were seen and appeared of little significance.

Cooperia spp.—Counts up to 5,000 e.p.g. were not usually associated with visible evidence of infection in young calves,

* **The Significance of Faecal Egg Counts in the Diagnosis of Parasitic Gastro-enteritis of Cattle.** ROBERTS, F. H. S., O'SULLIVAN, P. J., & RIEK, R. F. (1951.) *Austral. Vet. J.* **27**. 1. 16-18.

though counts of 10,000 to 87,000 e.p.g. in calves three to five months old might cause death.

Bosicola radiatus.—Counts over 500 e.p.g. were important and 1,000 e.p.g. indicated a seriously pathogenic infestation.

Bunostomum phlebotomum.—500 to 800 e.p.g. indicated a highly pathogenic infestation and 300 e.p.g. was considered dangerous.

[Although it is not emphasised, the information in this article gives abundant support to the necessity of distinguishing the different infestations of parasites, as this is important from the point of view of prophylaxis, prognosis and anthelmintic dosage.]

J. S. S.

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Oedema of the Bowel in Pigs*

A series of serum protein estimations in the blood of pigs from infected litters was carried out. So far, 44 such samples have been examined, as well as some controls. Of the latter, 38 controls gave average figures for serum protein of 6·64 grammes per cent. Forty-four samples from in-contact and affected pigs gave an average of 4·68 grammes per cent., although the majority of these pigs did not show symptoms of the disease. None of the sick pigs examined had a serum protein level above 5 grammes per cent. Some in-contacts and apparently normal pigs had this low level also. This preliminary work tends to show that there is a well-marked hypoproteinaemia associated with this gut oedema.

D. J. A.

* **Oedema of the Bowel in Pigs.** Luke, D., & Gordon, W. A. M. (1950.) *Nature.* **165.** No. 4190.

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Utilisation of Pigs for the Production of Lapinised Rinderpest Virus*

In Thailand, a goat-adapted rinderpest virus used for immunising the resistant cattle is too virulent for water buffalo which have had to be immunised with inactivated buffalo vaccine. A virus modified by passage in rabbits proved suitable apart from the difficulty of obtaining sufficient material. The authors noted that Thailand pigs, which are pure native breeds, were susceptible to lapinised virus although European breeds were resistant. Passage in pigs did not modify lapinised virus as an immunising agent for buffalo. Seventeen passes were maintained in pigs but the more satisfactory virus was produced by alternate pig rabbit passes. A pig yields 1,200 doses of attenuated virus whereas a buffalo yields only 200 doses of inactivated virus. Pig virus could be dried without undue loss, but dried virus was more susceptible to inactivation at laboratory temperatures than dried goat virus. Under field conditions, 5 mg. of dried pig virus protected 12 of 16 immunised buffaloes challenged 14 days later. Under similar conditions, all of 33 resisted challenge after immunisation with 10 mg. of dried virus.

A. W. G.

* **The Utilisation of Pigs for the Production of Lapinised Rinderpest Virus.** Hudson, J. R., & Wongsongsarn, C. (1950.) *Brit. Vet. J.* **106.** 453 (nine refs.).

According to a recent report, U.S. ham curing factories will soon be demolishing their smokehouses and adopting a new method by burning sawdust with propane, a petroleum gas. Claims for the technique are reducing shrinkage and increasing the succulence of the meat.

REPORT

[Trinidad and Tobago: Administration Report of the Director of Agriculture for the year 1949.]

Most of the work of the Department of Agriculture for these islands is concerned with the main export commodities such as cacao, sugar, coconuts, citrus fruits, etc., and the report contains a wealth of information about the diseases affecting these crops. Improved methods of cultivation were studied extensively during 1949 and such factors as improved root-stocks and shade trees were investigated. Much was also done to improve animal health and the standards of animal husbandry. The department is handicapped by lack of staff and by its officers having to perform a mass of routine duties ranging from the judging of school gardens to the destruction of nests of the parasol ant.

During the year under review the weather was generally kind but on September 1st 20 inches of rain descended on Tobago in 24 hours.

Progress was made in the development of the Central Experiment Station and a small veterinary diagnostic laboratory was established at the Government Farm, St. Joseph, under the direction of the Veterinary Officer.

One outbreak of swine fever was the only case of a proclaimed disease during the year and farmers were enabled to have their pigs vaccinated with crystal violet vaccine for a small fee. Vaccination against paralytic rabies was carried out in a few areas where bat-biting occurs.

Tuberculin testing was continued and 980 tests on Government cattle yielded only 2·6 per cent. reactors as against 15·3 per cent. in 1948. Water buffaloes generally appeared to give a high percentage of reactors but opposition amongst the peasants to the testing of their cattle is gradually being overcome.

Other diseases mentioned in the report which were encountered during the year were strangles, piroplasmosis, mastitis, swine erysipelas and calf pneumonia.

Livestock shows were encouraged by the department and approximately 3,000 services were given by improved sires. Livestock improvement was also encouraged by the sale of considerable numbers of young stock from the Tobago farm.

At the Trinidad farm investigations were continued into the best methods of animal husbandry under the local conditions and changes were made in the management of the dairy cattle on the farm.

Pasture and forage improvement also received attention and it was found that guinea-corn was a useful crop.

It is interesting to note that bee-keeping makes an important contribution to local food supplies and the export trade, over 62,000 lb. of honey being exported during the year under review.

P. G. H.

THE STUDY OF FERTILITY

The third annual meeting of the Society for the Study of Fertility will be held in the Meeting House of the Zoological Society of London during June 27th-28th. Papers will be read on subjects covering the whole field of fertility and sterility, from the biological and veterinary as well as medical points of view. One of the sessions will be devoted to a symposium on sperm morphology. The meeting will be open to any qualified person with an interest in the field of fertility, and those who are not members of the Society should communicate with the Hon. Secretary, Dr. G. I. M. Swyer, University College Obstetric Hospital, Huntley Street, London, W.C.1, from whom further particulars can be obtained.

REVIEW

[Your Dairy Farming Problems Solved. Published by *Dairy Farmer* (Books) Limited, 10, Tavern Street, Ipswich. Price 10s. 6d. Postage 9d.]

This is the third recent publication sponsored by the *Dairy Farmer* to cater expressly for the farming community. Whilst one may deplore the tendency to crystallise knowledge, thereby running the risk of distorting values and misleading the reader, the enormous outpouring of fresh information to-day makes this step necessary. Not only farmers but those in every walk of life are apt to slake their thirst for the knowledge of those things which vitally concern them. It is a good thing, is it not, if the habit does not run riot and the reader lose his sense of proportion.

The answers given herein are not intended to replace the expert but to enlighten the reader and enable him to carry out his daily routine with a greater degree of intelligence and so more readily reveal the point at which the expert's help is wanted.

At least 40 problems are discussed, 20 or more questions being answered under such headings as "Care of the Calving Cow," "Contagious Abortion," "Electric Fencing," "Feeding Grass Silage," "Grading up Your Dairy Herd," "Minerals for Cows," "Parlour Milking," "Scour in Calves," "Steam Sterilisation" and "Water Supplies." In addition, there is a short but valuable illustrated appendix giving the salient points of the seven commonest breeds of cattle found in this country.

The information, which from the titles obviously covers a very wide field indeed, has been provided by people thoroughly experienced in the particular subject. Whilst the problems relating to disease as such will not have any special appeal to veterinarians, there is much valuable information regarding costings, the layout of buildings and agricultural procedures, which he will find useful. The book can also be recommended to the agricultural and veterinary student.

PEDIGREE BREED SALES "DISGRACE"

"It cannot too often be emphasised that pedigree by itself is worthless; it must be allied to commercial worth." Thus the *Farmer and Stock-breeder* concludes a forceful leader headed "A disgrace to the sales" prompted by the following words recently spoken by a Breed Society President: "Those who have the welfare of the breed at heart would be performing a service if all unthrifty production animals were sold in local markets, and not sent to breed sales. The position has shown practically no improvement. . . ."

"One could go further than that" (proceeds the *F. & S.B.*). "Some of the cattle—particularly older females—have no place in any market whatsoever. Their right place is the grading centre. As a result of the high proportion of moderate cattle being sent, sales sponsored by Breed Societies or by firms of high and long-established reputation are fast losing their good name. They are coming to be regarded by intending buyers as the dumping ground for culls, as events to be avoided rather than those at which surplus but reliable animals can be bought. Good sound cattle have been making less than their worth, the price being dragged down by the inferior stock with which they are mixed. The real breeder is the person who suffers most of all.

"How is this deplorable state of affairs to be put right? Some Breed Societies have instituted a system of inspection by stewards, but this usually amounts to very little in the event. A few of the worst specimens may be sent home, whereas on occasions during this past season as much as half the entry has been below the standard of quality which should be insisted upon.

"No; the solution can come only from an appreciation by breeders themselves of the harm that is being done by misguided or ignorant men. Females which may have high sounding names, but are either obviously unsound or incapable of economic production, are seriously damaging the name of the whole pedigree dairy cattle industry."

QUARTERLY MEETING OF COUNCIL, B.V.A.

Summary of Proceedings

A short brisk debate on a motion "That, in order to further and maintain the best interests of this Association, the quarterly meetings of this Council and its relevant Committees shall, after April, 1952, be held in London," provided an unusual opening for the meeting of Council held on Friday, February 1st, 1952, with the President, Mr. Alan J. Wright, in the chair. The motion was rejected, but the President took full advantage of the opportunity to stress the obligation of southern members loyally to support the Council and Committee meetings continuing north of the Border.

Council granted with enthusiasm the application for Divisional Membership made by the newest veterinary society—that formed under the aegis of the R.A.V.C. Officers' Club—the President commenting: "We are delighted that they have formed this Division which will cement the friendship between the R.A.V.C. and their civilian colleagues."

There followed tributes to one of the outstanding Presidents of the Association, Mr. H. W. Steele-Bodger (1939-41), in obituary references which linked the meeting in spirit to the immediately succeeding gathering—reported in our issue of February 9th—at which the Association made thankful acknowledgment of a life of service, in the posthumous bestowal of Honorary Membership.

The report of the Technical Development Committee revealed that material is moving forward toward publication on a wide front; also that a vital requirement in the successful prosecution of the committee's work is the provision of actual evidence from the field in such matters as methods of dishorning, and the use of rubber bands for castration and docking of calves and lambs. In connection with the further Grassland Conference which it is hoped to hold in the latter part of this year, it should be noted that "Grassland" includes *all* fodder crops.

The Association's recommendations regarding the radical revision of the Animals (Anaesthetics) Act, 1919, have gone forward to the Ministry of Agriculture, states the Parliamentary and Public Relations Committee, which also is enlisting the aid of the Editorial Committee in campaigning against the recommendation, in the report of the Committee on Pay and Organisation of Civil Service Medical Staff, that the present practice be continued of limiting to medical men recruitment to posts as inspectors under the Cruelty to Animals Act, 1876. Difficulties associated with the interpretation of the ethical code in connection with the public relations work of the Association are to be discussed with the Royal College.

The Organising Committee came under fire from some quarters because of the operation of the B.V.A./R.S.P.C.A. agreement regarding Joint Free Veterinary Advice and Treatment Schemes. Was not the number of new clinics being opened as the result of the revised agreement excessive? Was everything possible being done to ensure that only the animals of the poor received treatment? The first answer was that local Divisions are consulted—and their advice taken—all along the line; the second, that the veterinary surgeon is the final arbiter as to whether or not the person presenting the animal can afford to pay a professional fee. Other points made were that the Association has no control over the clinic activities of animal welfare societies other than the R.S.P.C.A., and that a ruling is to be sought from the Royal College as to the conditions under which licences are granted to the unqualified employees of such societies

A large section of the report of the Veterinary State Medicine Committee was devoted to a series of questions received from the South Wales Division concerning the Calfhood Vaccination Scheme, and the replies received from the Ministry, to whom they had been referred. In discussion, the opinion was expressed that a larger number of controlled experiments should have been conducted to determine more specifically the duration of the immunity conferred by the S 19 vaccine—a vital point. The Ministry, however, were accorded full marks for the efforts made to overtake arrears of work under the Attested Herds Scheme. The improvement of arrangements at slaughterhouses for dealing with "casualty" animals was (said the President) proving a very difficult matter, and the Association was taking it up with the Ministry of Food to see if some degree of uniformity—and satisfaction—could

be achieved. A Sub-committee has been appointed to formulate a scheme for the more extended use of crystal violet vaccine, the main committee having made it clear, meantime, that it has not arranged to fix fees for the vaccination of pigs against swine fever, but merely to make suggestions for the guidance of those members concerned. Council added its approval to that accorded by the General Purposes and Finance Committee to the pilot scheme proposed by the B.V.A.-M.M.B. Liaison Committee for bringing about more effective co-operation between practising veterinary surgeons and M.M.B. Cattle Breeding Centres. It also acquiesced in the recommendation that, in view of the importance of the proceedings of the Veterinary Hygiene Section of this year's R.S.I. Congress at Harrogate, which renders it desirable that the Association should be well represented, the dates for holding the meetings of Council and Committees in Edinburgh should be altered to April 29th and 30th and May 1st.

QUESTIONS IN PARLIAMENT

Fowl Pest

Mr. Peter Freeman (February 4th) asked the Minister of Agriculture how many head of poultry and other birds were destroyed on his order following fowl pest epidemic or other similar cause during 1950; the variety and number in each case; and what compensation was paid.

Sir T. Dugdale: The number of birds slaughtered on the orders of my Department in connection with outbreaks of fowl pest during 1950 and the amount of compensation paid in respect of them are shown in the following statement. No birds were slaughtered for any other similar cause.

	Number Slaughtered	Compensation £
Domestic fowls	67,276	67,260
Turkeys	142	546
Geese	103	195
Ducks	1,182	987
Guinea fowl	75	41
Pigeons	9	2
	68,787	£69,031

Pit Ponies and Horses

Mr. Peter Freeman (February 4th) asked the Minister of Fuel and Power the number of individual mines in each coalfield or division at which no ponies and horses were employed below ground at June 30th, 1951; the number of mines in each division at which more than 10 and more than 50 horses and ponies are employed below ground; and the number at which more than 100 are so employed.

Mr. Geoffrey Lloyd: The following is the information:

Number of Mines* at which Horses and Ponies were Employed Underground at June 30th, 1951

	Number of horses employed	Number of mines employing			
		1 to 10 horses	11 to 50 horses	51 to 100 horses	101 horses and over
Scottish	325	20	1	—	—
Northern	49	13	27	14	3
Durham	61	20	63	22	16
North Eastern ...	101	24	46	11	4
North Western ...	138	1	1	—	—
East Midlands ...	46	39	51	—	—
West Midlands ...	118	30	17	1	—
South Western	142	131	90	4	2
South Eastern ...	4	—	—	—	—
Great Britain ...	984	278	296	52	25

* The figures refer to all mines as defined in the Coal Mines Act, 1911.

NOTES AND NEWS

Diary of Events

Feb. 16th.—Meeting of the Biochemical Society, in the London School of Hygiene and Tropical Medicine, Keppel Street, W.C.1, 11 a.m.

Feb. 18th.—Lecture by Professor Marc Klein (Strasbourg) at Reading University, 5.30 p.m. (See Notice.)

Feb. 18th.—Annual General Meeting of the Midland Counties Division, B.V.A., at Birmingham (Medical Institute, 154, Great Charles Street), 2.30 p.m.

Feb. 19th.—Annual General Meeting of the Eastern Counties Division, B.V.A., at Norwich (Bell Hotel), 11 a.m.

Feb. 20th.—Meeting of the Section of Comparative Medicine, Royal Society of Medicine, 1, Wimpole Street, W.1, 5 p.m.

Feb. 20th.—Meeting of the West of Scotland Division, B.V.A., at Glasgow (North British Hotel), 2.30 p.m.

Feb. 21st.—Meeting of the Herts and Beds Division, B.V.A., at St. A'bans (70, Holywell Hill), 2.30 p.m.

Feb. 21st.—Meeting of the Dumfries and Galloway Division, B.V.A., at Dumfries (Station Hotel), 2.15 p.m.

Feb. 27th.—Annual General Meeting of the Lancashire Division, B.V.A., at Manchester (Grand Hotel), 2.30 p.m.

Feb. 27th.—Annual General Meeting of the Scottish Metropolitan Division, B.V.A., in the Royal (Dick) School of Veterinary Studies, University of Edinburgh, 2.30 p.m.

Mar. 6th.—Meeting of the Society of Practising Veterinary Surgeons (Division, B.V.A.) in the University of Glasgow Veterinary School, 2.30 p.m.

Mar. 7th.—Liverpool University Veterinary Society's Annual Ball, in the Students' Union, Bedford Street, 8 p.m.

Mar. 12th.—Meeting of the Technical Development Committee, B.V.A., at 36, Gordon Square, London, W.C.1, 10.30 a.m.

April 29th, 30th, and May 1st.—Meetings of Council and Committees, B.V.A., in the Royal (Dick) School of Veterinary Studies, Edinburgh.

Sept. 8th—13th.—Seventieth Annual General Meeting and Congress of the British Veterinary Association, at Harrogate.

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B.V.A. Harrogate Congress, 1952

Mr. J. O. Powley, M.R.C.V.S., has been appointed Chairman of the Provisional Committee for the above Congress, and Mr. K. G. Towers, B.V.Sc., M.R.C.V.S. (Hon. Secretary, Yorkshire Division, B.V.A.), Local Secretary. The Congress will be held from September 8th to 13th.

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PERSONAL

Births.—Allcock.—On January 29th, at the West Mall Nursing Home, Clifton, Bristol, to Pamela, only daughter of E. C. Bovett, M.R.C.V.S., and James Allcock, M.R.C.V.S., B.V.Sc., a son, Stephen James.

Venn.—On January 24th, 1952, at Weston-super-Mare, to Betty (*née* Jackson), wife of J. A. J. Venn, a son—Timothy.

Forthcoming Marriage.—Denham—MacMichael.—The engagement is announced of Peter Gordon Denham, elder son of Mr. and Mrs. W. W. Denham, Upper Shide Mill House, Newport, Isle of Wight, and Esther Mary H. MacMichael, M.R.C.V.S., only daughter of Captain and Mrs. E. T. MacMichael, Woodcote Lodge, Wimbledon Common, S.W.19.

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PARLIAMENTARY AND SCIENTIFIC COMMITTEE

The following have been elected officers of the Parliamentary and Scientific Committee for 1952: President, Lord Samuel; Chairman Sir Wavell Wakefield, M.P.; Vice-Chairman, Sir Henry Tizard; Deputy Chairmen, Sir Ralph Glyn, M.P., and Mr. W. T. Wells, M.P.; Hon. Treasurer Dr. H. J. T. Ellingham, of the Royal Institute of Chemistry; Honorary Secretaries, Mr. C. I. Orr-Ewing, M.P., Mr. A. Albu, M.P., and Dr. W. R. Wooldridge.

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U.S.A. FARMERS HONOUR LORD BOYD-ORR

Lord Boyd-Orr, former Director-General of the United Nations Food and Agriculture Organisation and winner of the Nobel Peace Prize in 1949 will receive the annual award of the National Farmers' Union of the United States. The award is given for outstanding service to agriculture and will be presented at the Union's annual convention at Dallas, Texas, on March 12th.

An authority on nutrition of world-wide repute, Lord Boyd-Orr began his researches into the subject in 1914, when he gave up a career in medicine. Following an address to our Ayr Congress in 1929, he was made an Honorary Member of the N.V.M.A. Lecturer at the International Veterinary Congress, London, 1949, he is now 71 and runs two farms in Angus, near Montrose. In 1946 he resigned his seat as Independent Member of Parliament for the Scottish Universities. Formerly he was Professor of Agriculture at Aberdeen University.

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BRITISH COUNCIL SCHOLARSHIPS ABROAD, 1952-53

The British Council, 65, Davies Street, London, W.1, has issued a list containing particulars of scholarships offered to British students by certain foreign governments and universities. Scholarships advertised are mostly for post-graduate study. Those possessing non-academic professional qualifications, or those not seeking facilities for academic study, are, however, free to apply in all cases save where the conditions of award restrict the subjects of study or necessitate attachment to an academic institution.

Copies of the list and application forms may be obtained from any British Council office in the United Kingdom, on receipt of a stamped, addressed foolscap envelope.

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FILM PREMIERE FOR THE ANIMAL HEALTH TRUST

We hope that strong support will be forthcoming from the profession for the world première of the new film "The Card," inasmuch as Mr. J. Arthur Rank is to give the entire proceeds to the Animal Health Trust. The première takes place at the Odeon Theatre, Leicester Square, on February 28th, at 8.30 p.m.

The principal parts in this famous Arnold Bennett comedy of the provincial clerk who made good, are Alec Guinness, Valerie Hobson, Glynis Johns and Petula Clark.

The Chairman of the Première Committee is Her Grace the Duchess of Norfolk and a very large and distinguished company is expected to attend.

Tickets, which vary in price from £10 10s. in the Royal Circle to £1 1s. Stalls, are available from the Duchess of Norfolk at Suite 1, 79, Davies Street, W.1.

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At the second annual general meeting of the Lancashire County Committee of the Animal Health Trust, held in Preston on February 5th, with Earl Peel, President, in the chair, it was announced that more than £4 000 had been raised in Lancashire to help the Trust's funds. Mrs. K. Hollas, the Hon. Secretary, said that in addition to the Poultry Sub-committee, which had organised such a successful appeal last November, other committees had been set up to cover canine, livestock and industrial interests.

Dr. W. R. Wooldridge, M.SC., M.R.C.V.S., F.R.I.C., Scientific Director and Chairman of Council of the Trust, briefly reviewed the progress of scientific activities during the past year.

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VETERINARY NEWS FROM ISRAEL

Mr. C. Aharoni, M.R.C.V.S., of Hadera, writes: "The Israel Veterinary Medical Association has to-day a membership of more than 140 veterinary surgeons, all of whom are busily engaged in practical, laboratory and food inspection work. Although the cattle population of the country is still very small (albeit quickly growing —over 50,000 head) its high average milk production (about 1,000 gallons) and great monetary value, and a host of infectious diseases, require an intensive veterinary service.

"About one-third of the members of the Association are employed by the Government which maintains a well-staffed laboratory service with bacteriological, virus diseases, parasitological and histopathological departments as well as an extensive field service for the prevention and control of infectious diseases. A further third is employed by a mutual Cattle Insurance Company covering about 80 per cent. of the country's cattle population, and each one is responsible for the treatment of the 2,000 to 2,500 individual animals in his district. The remaining members are engaged either in meat and fish inspection on behalf of the local authorities, or in private practice.

"The Association publishes a quarterly scientific journal in Hebrew with an English summary. This periodical is now in its ninth year and is exchanged with the majority of the world's veterinary papers.

"It is hoped, in a series of future short communications, to give some further details of the problems facing the veterinarian in this corner of the Mediterranean, but two recent outstanding events might now be mentioned. Under the auspices of the World Health Organisation and the guidance of its Chief Veterinary Officer, Dr. Kaplan, of U.S.A., an energetic, country-wide campaign of vaccination of the dog population against rabies has been in progress for about a year, and so far, with great success. Also, during November, 1951, we had the great pleasure of a visit from Mr. Horace Thornton, again on a W.H.O. assignment, who lectured to enthusiastic audiences on the subject of food inspection."

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CRUFT'S DOG SHOW

This year is the centenary of the birth of Charles Cruft, the founder of the show, and it was fitting that the event at Olympia on February 8th and 9th should be marked with a world record entry: 6,040 dogs entered in 12,448 classes. Cruft's has thus beaten the record it had set up in 1950, when there were 5,720 dogs in 12,319 classes. The show has grown to such an extent that this year, for the first time, it covered the whole area of the Grand and National Halls. Since the first post-war Cruft's show in 1948 about 7,000 British-bred pedigree dogs have been exported. The total received from these oversea sales is estimated at more than £1,000,000, half of which has been received in dollars.

The principal event of this year's show was the grand parade, in which some 50 best-of-breed winners competed for the best-in-show award. Gradually the dogs were eliminated until only four remained in the ring: the bulldog Champion Noways Chuckles, owned by Mr. J. Barnard, the English setter Ripleygae Top Note, owned by Miss M. E. Jarry, the French bulldog Champion Morebees Birmand Benjamin, owned by Mrs. Y. Henderson, and the Dalmatian Champion Ambala Sahib, owned by Mrs. C. E. Allen. The three judges, Mrs. W. Barber, Mr. J. W. H. Beynon and Mr. A. MacNab Chassels, decided in favour of the bulldog, with the setter as runner-up. These two winners met the previous day's finalists for the supreme Cruft's championship, in which Mr. T. Roger Boulton and Mr. A. Croxton Smith judged the bulldog Champion Noways Chuckles to be best-in-show of all breeds, with the setter as reserve. The obedience test—an innovation—was won by Mr. E. Sandon Moss's Alsatian obedience champion Ennice of Mossville.

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SWINE FEVER: EAST ANGLIAN RESTRICTIONS REMOVED

The Ministry of Agriculture and Fisheries reports that the swine fever position in the eastern counties of England now shows a considerable improvement compared with last October, when it was necessary to impose restrictions on the movement and marketing of swine in that area under the Swine Fever (Eastern Counties Infected Area) Order of 1951. The Order therefore has been revoked.

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FOWL PEST RESTRICTIONS RELAXED

The considerable improvement that appears to have taken place during recent months in the fowl pest position in the country generally has led the Ministry of Agriculture to relax some of the restrictions on the movement and marketing of live poultry that have been in force in Great Britain during the whole of the past year. An Order entitled the Live Poultry (Restrictions) Order 1952 has therefore been made to give effect to this decision: it came into force on February 4th, 1952.

There has never been an outbreak of fowl pest in the Isles of Scilly and no outbreak has been recorded in Scotland during the past four months. All restrictions on the movement, marketing and exhibition of live poultry in those areas have, therefore, been cancelled, but because the disease position cannot yet be regarded as so satisfactory in other parts of Great Britain the ban on the movement of live poultry (including day-old chicks) and hatching eggs into Scotland and the Isles of Scilly from other parts of Great Britain is maintained.

There have been about 250 outbreaks of fowl pest in Lancashire during the past four months and, therefore, the restrictions in a part of that county will for the time being need to be more severe than in other parts of England and in Wales. The part of Lancashire in which these more stringent regulations will apply is that portion of the county that lies to the south of the River Wyre and to the west of the main railway running from Lancaster to Warrington. The County Borough of Preston is, however, excluded from this area. The holding of poultry shows and of store markets will still be prohibited in the area, but markets of poultry intended for immediate slaughter may be authorised by the local authority. No poultry or day-old chicks may be moved into, within or out of the scheduled area unless accompanied by a licence; movements by rail direct through the area will, however, be allowed without a licence.

In other parts of England (except the Isles of Scilly) and in Wales markets of poultry intended for immediate slaughter will still have to be licensed and the holding of store markets will again be permitted (under licence) subject to certain conditions.

The movement of live poultry from any premises on to which there has been a movement of poultry other than day-old chicks within the previous 28 days is still prohibited in England and Wales (except the Isles of Scilly). The holding of poultry shows will be allowed.

The restrictions on the movement of poultry within and out of the previous Scheduled Areas around London, Birmingham, Liverpool/Manchester, Bristol and South Wales have been removed.

The existing provisions applicable to the whole of Great Britain regarding the cleansing of crates at markets and the keeping of records by dealers and auctioneers have been included in the new Order. Copies of the Order may be obtained from H.M. Stationery Office or from Ministry of Agriculture and Fisheries, Hook Rise, Tolworth, Surbiton, Surrey.

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BEE DISEASES: CONTROL MEASURES

As a further preventive measure against the spread of bee diseases and following a recommendation of the Bee Disease Advisory Committee, the Minister of Agriculture and Fisheries has made an Order under Section 11 of the Agriculture (Miscellaneous Provisions) Act, 1941. The new Order is known as the Foul Brood Disease of Bees Order, 1952. It supersedes the Foul Brood Disease of Bees Order, 1942, which it revokes.

The new Order provides for the examination of bees, combs and bee-keeping equipment by an officer of a County Agricultural Executive Committee and for the taking and testing of sample combs. A notice prohibiting the removal of bees, combs, honey and equipment may be served where Foul Brood Disease is suspected and if the presence of disease is confirmed, destruction of the infected bees and combs may be required with destruction or treatment of the infected equipment.

The new Order differs from the 1942 Order in the following respects:—

1. From February 1st, 1952, County Agricultural Executive Committees may specify areas within which examinations may take place without necessarily suspecting that an actual outbreak of disease exists. This is to make systematic inspection possible.

2. Where European Foul Brood Disease is found, a "standstill" notice may be served which will remain in force until the end of the active season following that in which the disease was dealt with. This is to give time for the disease to manifest itself in any other hives in the apiary in which it may have been present, but not apparent, at the time of the original inspection.

3. If a bee-keeper is convicted for failure to comply with a notice requiring him to destroy or treat infected bees or equipment, the County Agricultural Executive Committee may themselves destroy or treat the infected bees and equipment to ensure that the necessary control measures are taken.

Copies of the Foul Brood Disease of Bees Order, 1952 (S.I. 1952, No. 138) may be obtained from H.M. Stationery Office, price 3d. net.

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ADDRESSES OF DISEASE-INFECTED PREMISES

The list given below indicates, first, the county in which are situated the premises on which disease has been confirmed, followed by the postal address and date of outbreak.

ANTHRAX:

Glos.—Padmore Farm, Longlevens (Feb. 4th).

Lancs.—Bridge House Farm, Laneshaw Bridge, Colne (Feb. 4th): Shepherd's Farm, Barnacre-with-Bonds, Garstang (Feb. 5th).

Lothian (E.).—Seggarsdean Farm, Haddington (Feb. 5th).

Perthshire.—Pondfaulds Farm, Rattray, Blairgowrie (Feb. 7th).

Salop.—Wickey Tree Farm, Market Drayton (Feb. 4th).

Staffs.—Booth's Farm, Cheadle (Feb. 4th).

FOOT-AND-MOUTH DISEASE:

Kent.—Rochester Meadow, Chatham Road, Maidstone, Kent (Feb. 12th).

Leics.—Burton Lazars, Melton Mowbray (Feb. 4th).

Norfolk.—Chestnut Tree Farm, St. Cross South Elmham, Harleston (Feb. 6th).

FOWL PEST:

Cambs.—Meadow Farm, Milton Road, Waterbeach, Cambridge (Feb. 7th).

Lancs.—Priory Farm, Chapel Lane, New Longton, Preston (Feb. 4th).

Middlesex.—237, Church Road, Northolt (Feb. 7th).

SWINE FEVER:

Cumberland—Drawdykes Castle Carlisle (Feb. 4th).

Essex—Hockley Hall, Hockley (Feb. 4th).

Lincs (Kesteven).—The Elms, Carlby, Stamford (Feb. 5th).

Lincs (Lindsey).—Stone Buildings, Greetwell Road, Lincoln (Feb. 4th): Snakeholme Farm, Bardney (Feb. 7th); Ingham Agricultural Services Ltd., Ingham (Feb. 8th).

Montgomery—Ingefield, Four Crosses, Llanymynech (Feb. 4th): Maesteg, Four Crosses, Llanymynech (Feb. 7th).

Northants—Cornhill Hotel Pattishall, Towcester (Feb. 6th); 69, Hinwick Road, Wollaston, Wellingborough (Feb. 7th).

Staffs.—12, Great Bridge, West Bromwich (Feb. 5th); The Vine Inn, Bell Street, Darlaston, Wednesbury (Feb. 6th).

Warwicks.—The Bungalow, Kingsbury Road, Minworth, Sutton Coldfield (Feb. 5th); Musson Hall Farm, Fillongley, Coventry (Feb. 7th).

Yorks (W.R.).—8-9, Brown Lane Allotments, Leeds 11.

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FIRST PAN AMERICAN VETERINARY CONFERENCE

We are indebted to Mr. D. A. RICKARDS, M.R.C.V.S., of Cleveland, Ohio, for the following account:

The week from October 20th to 27th, 1951, commemorated the first Pan American Veterinary Conference. It was held in Lima, Peru, and attended by 129 veterinary surgeons representing almost all the countries on the North and South American continents. Great Britain's official delegate was Captain Vincent Boyle, C.M.G., M.R.C.V.S., who has been the Ministry of Agriculture's official in Buenos Aires, Argentina, since 1943. There were two other members of the Royal College of Veterinary Surgeons; namely Harry Preston, long time resident of Lima and 1951 President of the Peruvian Veterinary Society, and D. A. Rickards, who has been in practice in the United States for the last three years.

The conference was originally planned for May last year in order to coincide with the 400th anniversary of the University of San Marcos. Difficulty in completing earlier arrangements brought about the postponement. However, the thoroughness with which the meeting was held and the smoothness of the proceedings displayed to all the members that an enormous amount of care and effort had been spent to enable us all to make the best of our stay in Lima. The prime organising movers were Dr. José Santivanez, Dean of the Veterinary School, and his aide, Dr. Juan Figueroa.

At the "Pachamanca," an outdoor party thrown one afternoon for the Congress members. From left to right: Dr. L. Mattsson of UNESCO, D. A. Rickards and Captain V. Boyle.

There were round-table discussions on the following subjects: Veterinary Education, Control of Rabies, Brucellosis, Tuberculosis, Foot-and-Mouth Disease, Public Health and Veterinary Medicine, Parasitism, and Environmental Factors Affecting Animal Production. A great number of papers were presented and read.

The week passed quickly and without a dull moment. There were innumerable luncheons and invitations of all kinds. One

afternoon, at the Pachamanca, we watched native dancing and indulged in a local fiesta, eating and dancing outdoors.

When the conference was over, 23 of us journeyed up into the mountains and spent two days as guests at a sheep ranch 11,500 feet high.

The hospitality of the Peruvians is something which has to be seen to be believed. We all lived as kings for a week and must congratulate the instigators of the Pan American Conference on their tremendous success.

* Anyone interested in further details should contact Dr. J. Santivanez, Dean of the Veterinary School, San Marcos University, Lima, Peru, S.A.

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PIG RECORDING SCHEME URGED

Addressing a recent conference on pig-keeping at Boston, Lincs, Mr. W. T. Price, Principal of Harper Adams Agricultural College, drawing attention to the importance of the "utility pedigree," said the pure breeds themselves were of little value because, after the 10th generation, only 1/1 000th part of the original blood was present. His advice was: "Think more about the future and not too much about ancestry." He hoped that soon every county would have its own pig recording scheme. With a pig population of nearly 4,000 000 in England and Wales, the time was now ripe for this step forward.

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Fougasse to Broadcast for U.F.A.W.—Many of our readers—intrigued as is the general public, by the personality behind the nom-de-plume—will be interested to listen to the appeal on behalf of the Universities Federation for Animal Welfare to be broadcast by Fougasse, the inimitable cartoonist, who is Chairman of the Federation. His broadcast will take place on all Home Services at 8.25 on Sunday, February 24th.

CORRESPONDENCE

The views expressed in letters addressed to the Editor represent the personal opinions of the writer only and their publication does not imply endorsement by the B.V.A.

PREVENTION OF BLOAT

Sir,—An article on prevention of bloat has appeared in the New Zealand *Dairy Exporter* for January, 1952, by Mr. P. D. Sears, Senior Plant Ecologist of the Grasslands Division of the Department of Scientific and Industrial Research. This should be of interest to veterinary surgeons and farmers of this country.

Intensity of bloat is associated with luscious short pasture usually containing high percentages of red and white clovers. The method advocated is to use the electric fence to give narrow, long strips of new pasture sufficient for two or three hours grazing after which the fence is moved forward. The pasture should not be short but about 8 inches in length and so a little more mature, but still of a fertility and food value to keep up milk production. With narrow strips cows walk in head first and soil pasture which has been grazed over rather than the fresh area. There is, too, a continuous intake of good food. This method is combined with as short a time as possible in the milking parlour so that the animal does not get too hungry. Should this time lag be too great, hay of good quality could be fed before return to pasture.

Farmers applying this method, which may not be 100 per cent. bloat proof, are very satisfied with the result, and have lost the worry attached to the constant oversight of a herd on dangerous paddocks.—Yours faithfully, C. S. M. Hopkirk, Agricultural Adviser (Veterinary), New Zealand Government Offices, 415, Strand, London, W.C.2. *February 8th*, 1952.

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CAUSES OF AGALACTIA IN THE SOW

Sir,—I was interested in Mr. A. Hogg's contributions on the above condition and join with Mr. H. A. Crawshaw in adding my congratulations.

Porcine diseases now assume much greater importance than hitherto because of the enhanced value of the industry and it is surprising that such a small amount of intensive research has been carried out in this sphere. Lack of knowledge and interest by the practitioners seemed mainly to spring from the old idea that there was not much one could do for so awkward an animal as a pig, but also pig keepers cannot be held blameless as, for one reason or another, they have not sought veterinary advice on a large scale. Since the advent of the sulphonamides, penicillin, crystal violet vaccine, etc., plus the greater value of animals, visits to piggeries have increased, with resultant increase of knowledge by both owner and veterinary surgeon.

The condition described by Mr. A. Hogg and Mr. H. A. Crawshaw as post-parturient fever is one I recognise in this area. Temperature usually is elevated 2 to 3 degrees; there is hardening of the posterior glands tending to extend forward. Although the glands appear gorged with milk, no milk can be withdrawn and so piglets are hungry. Much the same symptoms appear in metritis except for discharge and difference of temperature, this sometimes being as high as 108° F.

Regarding treatment, I find myself at variance with Mr. Hogg and Mr. Crawshaw. Penicillin only is used in one large dose, rarely are two required, and provided treatment is instituted early, the piglets do not seem to suffer any material setback.

These cases are seen mainly in the "cold piggeries" although others may be affected.—Yours faithfully, E. G. Wood, 12-16, Bread Street, Edinburgh, 3. *February 6th*, 1952.

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OEDEMA DISEASE IN SWINE

Sir,—I was very interested in Mr. R. J. A. Swift's conclusions about this disease in his letter in your issue of February 2nd, as after trying almost every drug in the pharmacopoeia, I have had almost unqualified success with injections of 100 mg. Betaxan (vitamin B_1). In stubborn cases, I combine it with "Phenergan."—Yours faithfully, Walter B. Forrest, Damory Lodge, Blandford, Dorset. *February 7th*, 1952.

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CAESAREAN SECTION IN THE BOVINE

Sir,—Four days after submitting an article to *The Veterinary Record* entitled "Bovine Caesarean Section—Observations on the different approaches," I receive a copy of your issue of December 29th and note that Mr. G. N. Gould is an advocate of what I term the "lower flank approach." In my article I refer to the fact that no reference to this approach had been found in the literature, but in the light of Mr. Gould's publication I must now amend my statement.

I find here, however, that owing to the type of husbandry practised in what was formerly termed "the wild west," the average Hereford or Aberdeen Angus cow is less co-operative with her veterinarian than is her British counterpart. Consequently, the removal of sutures from the lower flank site is often far more damaging to the surgeon (from the view-point of wounded dignity as well as physical damage) than the upper flank approach.—Yours faithfully, F. J. Milne, Colorado Agricultural and Mechanical College, Fort Collins, Colorado. *January 23rd*, 1952.

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NUTRITIVE VALUE OF COLOSTRUM FOR THE CALF

Sir,—In your correspondence columns Dr. C. A. E. Briggs has raised certain objections to an abstract, appearing over my initials, of a paper by his colleagues and himself. You have already indicated that two of the three points in question were not the concern of the abstractor, but for the remarks in square brackets to which he refers I must admit responsibility. I should like to express my regret at having caused any misunderstanding or inconvenience and conclude that, in view of the fact that Dr. Briggs has felt it necessary to compare the procedures adopted with those of artificial infection, I must have expressed myself very imperfectly. None of us who was a member of the Cambridge team that commenced work on colostrum deprivation in 1943 could possibly need convincing of the merits of "exposure" as opposed to the artificial administration of infective agents. Indeed that view has been consistently stressed by us at meetings and in committee from 1944 onwards, and it is perhaps unfortunate that only now are the detailed results of that earlier work being prepared for publication.

The thought that I intended to convey in the parenthetical note was that there might have been subtle changes with time in the degree of environmental risk to which calves at Shinfield were exposed. I am sure that in this I am not alone among those who have followed carefully the excellent series of papers by the joint Shinfield-Royal Veterinary College team, which has added considerably to our knowledge of the whole subject.

In view of the fact that Dr. Briggs does not approve of the adoption in your columns of the name *Escherichia coli* it is surprising, or perhaps again a matter of editorial amendment, that in a joint paper just published by some of his colleagues at Shinfield in the January, 1952, issue of the *Journal of the Science of Food and Agriculture* this terminology has been adopted!—Yours faithfully, Alastair N. Worden, Cromwell House, Huntingdon. *February 9th*, 1952.